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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 20

Application Number: 09/546,993
Filing Date: April 11, 2000
Appellant(s): TONG, DAVID PHILIP

Kent A. Lembke, Reg. No. 44,866
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/08/03.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) ***Grouping of Claims***

Appellant's brief includes a statement that claims 6, 8, 3, 1 and 7 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) ***Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) ***Prior Art of Record***

5,703,627	YOUNG	12-1997
5,406,310	ASCHENBRENNER	04-1995

(10) ***Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

a. Claims 1, 3-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young and further in view of Aschenbrenner et al. [US 5406310]. This rejection is set forth in prior Office Action, Paper No. 17.

b. Claims 6 and 8 are rejected under 35 U.S.C. 102 (b) over Young (U.S. Patent No. 5,703,627). This rejection is set forth in prior Office Action, Paper No. 17.

(11) ***Response to Argument***

A. Response to part A. in appeal brief

In the Appeal Brief filed 12/08/03, appellant argues that rejection of claim 6 and 8 under 102(b) based on Young is improper but appellant's arguments are not actually in the claim.

Independent Claim 6	US Patent No. 5,703,627 to Young
6. A method for reducing colormap flashing on a display system, the display system having a frame buffer which provides a single hardware colormap, the method comprising the steps of:	A method for reducing color flashing by performing residual color allocation and default colormap sharing in a computer system that employs a default colormap to display color. (Abstract Lines 1-3) The hardware color table functions to store a software colormap. (Col. 3 lines 55-56)
intercepting a request from an application program for an allocation of a private colormap;	When a client requires read-write access to more color cells than there are free cells in the default colormap (col. 1 lines 53-54). This is a request for private colormap.
transparently simulating the allocation of the private colormap using a default colormap, wherein the simulating includes allocating a secondary lookup table comprising entries mapped to entries in the default colormap; and	The first part means the default colormap is used to satisfy private colormap request, by allocating a secondary lookup table. Young teaches that the client creates a colormap for private use. (Col. 1 lines 53-55) (allocates a secondary lookup table). Since a colormap is an indexed look-up table (Col. 1 line 29-30) and index location is used to index directly into the color table (Col. 4 line 31-32), then the entries in the private lookup table are mapped to the entries in the shared default colormap by these references (Col. 4 lines 31-39). (Young disclose in the same column an example for indexing that states "If the color of an area within the screen, (such as background area 14, FIG. 1) is designated to be colorized by a given pixel index, then the color displayed for area 14 is whatever color is stored at that particular indexed location stored in the color table hardware of the computer system. For instance assume that area 14 is designated to be colorized with the color value stored at the pixel 3 index location."
determining whether a private color cell has been requested by the application program and writing said private color cell to the default colormap.	When a client requires read-write access to more color cells than there are free cells in the default colormap (request for private color cell), (Col. 1 lines 53-54). color values from the color cells in the client's private colormap are copied into the allocated read-write cells in the shared default colormap at corresponding index locations.(col. 2 lines 45-47).

The following numbered paragraphs are analysis of 2nd step of claim 6.

a. Claim 6 claims, "transparently simulating the allocation of the private colormap using a default colormap".

Since "Simulating" means to create a representation or model of (a physical system or particular situation, for example), according to the American Heritage® Dictionary of the English Language, Fourth Edition Published by Houghton Mifflin Company, then "transparently simulating the allocation of the private colormap using a default colormap" means the default colormap is used to satisfy private colormap requests (Young disclose in abstract line 1-3).

b. Further claim 6 claims, "allocating a secondary lookup table comprising entries mapped to entries in the default colormap"; this is the same as creating a colormap (or an indexed lookup table) for private use. This indexed lookup table is called secondary lookup table by appellant.

Appellant argues on page 5 lines 3-5 of third paragraph, "The difference between the use of a private colormap and simulating a private colormap using the default

colormap is an important element of the described and claimed invention used to prevent color-map flashing." but "prevent color-map flashing" is not in the claim.

Appellant further argues on page 5 lines 5-8 of third paragraph, "As defined at page 3, lines 1-2 of the specification, a "private colormap" provides a client device a "full set of 256 cells that are not shared with any other client and which is stored in the frame buffer", but underlined elements are not in the claim.

Appellant argues on page 5 lines 8-11 of third paragraph, "In contrast, simulating a private color-map is performed according to claim 6 by allocating a secondary lookup table mapped with entries in the default colormap, i.e., a location or reference to a cell in the default colormap is stored in the secondary lookup table rather than a color value as would be the case in a private colormap" and on page 6 lines 1-2 "secondary lookup table can be stored in conventional memory", but underlined elements are not in claim 6. In addition, claim 6 only claims "entities mapped to entities in the default colormap" and this is disclosed by Young as mentioned above.

Appellant continues on page 6 lines 2-4,"During operation 516 of Figure 5, a cell in the secondary lookup table is associated or mapped with the location of the cell from the default colormap and a private color value is not actually stored in the cell" and on page 6 line 5 "a closest match is used and mapped to the secondary lookup table" again underlined elements are not in claim 6.

Also there is discrepancy in aforementioned appellant's argument and independent claim 6. Independent claim 6 states in last line "writing said private color

cell to the default colormap" but appellant argues that "a closest match is used and mapped to the secondary lookup table rather than assigning a new color or color value as would be the case with a private colormap".

Furthermore appellant argues in second paragraph of page 6 lines 5-6 "Young is attempting to solve the flashing problem by making the default colormap contain the same color values as private colormaps". This is the same as "writing said private color cell to the default colormap" which is one of the elements in claim 6.

Accordingly, independent claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Young.

Regarding independent claim 8, in lines 4-9 of the second paragraph, page 7 of the appeal brief, it is stated that "claim 8 calls for the secondary lookup table to store "information received from the application program relating to the intercepted request." and "A further patentable difference is that the allocation simulating "includes associating a cell in the secondary lookup table with a location of a cell in the default colormap and returning the location of the cell in the default colormap to the application program as a response to the intercepted request."

Although "a private colormap" is not created but "a secondary lookup table" is instead created and client application uses this secondary lookup table to store information related to its request for private color (information can include color value, index location and...) and this is taught by Young as mentioned before.
Accordingly, independent claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Young. Also, the following tables are provided for an element-by-element

analysis of claim 8.

Independent Claim 8	US Patent No. 5,703,627 to Young
8. A method of reducing colormap flashing on a display system, the display system having a frame buffer which provides a single hardware colormap, the method comprising the steps of:	A method for reducing color flashing by performing residual color allocation and default colormap sharing in a computer system that employs a default colormap to display color. (Abstract Lines 1-3) The hardware color table functions to store a software colormap. (Col. 3 lines 55-56)
intercepting a request from an application program for an allocation of a private colormap; and	When a client requires read-write access to more color cells than there are free cells in the default colormap, the client creates a colormap for private use. (Col. 1 lines 53-55)
transparently simulating the allocation of the private colormap using a default colormap, wherein the default colormap is retained in the frame buffer during the simulating and the simulating includes allocating a secondary lookup table for storing information received from the application program relating to the intercepted request;	The first part means the default colormap is used to satisfy private colormap request, by allocating a secondary lookup table. Young teaches that the client creates a colormap for private use. (Col. 1 lines 53-55) (allocates a secondary lookup table). The client then stores **colors it needs** (received information relating to the request) into any cell of the private colormap (secondary colormap) col. 4 line 31-43). Young does not teach that default colormap is swept out by the above action. Therefore the default colormap is retained in the frame buffer during the simulating.
wherein the simulating includes associating a cell in the secondary lookup table with a location of a cell in the default colormap and returning the location of the cell in the default colormap to the application program as a response to the intercepted request.	Since a colormap is an indexed look-up table (Col. 1 line 29-30) and index location is used to index directly into the color table (Col. 4 line 31-32), then the entries in the private lookup table are mapped to the entries in the shared default colormap through associated index locations (Col. 4 lines 31-39). For "returning the location of the cell in the default colormap as a response", Young disclose in col. 4 lines 31-36 by stating that "if the color of an area within the screen is designated to be colorized by a given pixel index, then the color displayed for area 14 is whatever color is stored at that particular indexed location stored in the color table hardware of the computer system". This means index location is returned as a response to the application's request for private color.

Appellant argues on page 8 second paragraph lines 7-9 "Young clearly does not teach returning the location of a cell in a default colormap to an application program as a response to a request for an allocation of private colormap."

Examiner disagrees because of the following reason mentioned in the aforementioned element-by-element analysis of claim 8 in which Young's anticipation of claim 8 was shown. Since a colormap is an indexed look-up table (Young's Col. 1 line 29-30) and index location is used to index directly into the color table (Young's Col. 4 line 31-32), then the entries in the private lookup table are mapped to the entries in the shared default colormap through associated index locations (Young's Col. 4 lines 31-39). For "returning the location of the cell in the default colormap as a response", Young disclose in col. 4 lines 31-36 by stating that "if the color of an area within the screen is designated to be colorized by a given pixel index, then the color displayed for area 14 is whatever color is stored at that particular indexed location stored in the color table hardware of the computer system". This means index location is returned as a response to the application's request for private color."

B. Response to part B. in appeal brief

In the Appeal Brief filed 12/08/03, appellant argues that rejection of claims 1, 3-5, and 7 under 103(a) based on Young in view of Aschenbrenner is improper.

Regarding independent claim 3 (Group III), appellant argues in lines 6-8 of the third paragraphs, page 8 "Young fails to teach or make obvious simulating a private colormap by providing a reference to a cell in a default colormap to avoid swapping

and flashing". Examiner disagrees and provides the below element-by-element analysis to show Young's anticipation of claim 3.

Independent Claim 3	US Patent No. 5,703,627 to Young
3. A computer program product, comprising: a computer usable code storage medium; computer readable code embodied in said storage medium for reducing colormap flashing on a display system, the display system having a single hardware colormap, the computer readable code comprising: computer readable code devices to cause a computer to effect intercepting a request from an application program for an allocation of a private colormap; and computer readable code devices to cause a computer to effect transparently simulating the allocation of the requested private colormap by providing a reference to a cell in a default colormap and retaining the default colormap in a buffer, whereby creation of and swapping to the requested private colormap are not performed by the computer program product.	A method for **reducing color flashing** by performing residual color allocation and default colormap sharing in a computer system that **employs a default colormap to display color.** (Abstract Lines 1-3) The hardware color table functions to store a software colormap. (Col. 3 lines 55-56) When a client requires read-write access to more color cells than there are free cells in the default colormap, the client creates a colormap for private use. (Col. 1 lines 53-55) Young teaches simulating the allocation of the requested private colormap by providing a reference to a cell in a default colormap in Col. 6 lines 50-51 by stating "residual color allocation is implemented on cells corresponding to pixel index locations". As said before pixel index location is a reference (map or index) to a cell in default colormap (Young disclose in Col. 1 line 29-30 and in Col. 4 line 31-39). Young disclose retaining the default colormap in a buffer in whereby creation of and swapping to the requested private colormap are not performed in abstract lines 1-3 by stating "a method for **reducing color flashing** by performing residual color allocation and default colormap sharing in a computer system that **employs a default colormap to display color.**"

Regarding independent claim 1 (Group IV), Followings are the element-by-element analysis.

Independent Claim 1	US Patent No. 5,703,627 to Young
1. A method of reducing colormap flashing on a display system, the display system having a frame buffer which provides a single hardware colormap, the method comprising the steps of:	A method for reducing color flashing by performing residual color allocation and default colormap sharing in a computer system that employs a default colormap to display color. (Abstract Lines 1-3) The hardware color table functions to store a software colormap. (Col. 3 lines 55-56)
intercepting a request from an application program for an allocation of a private colormap; and	When a client requires read-write access to more color cells than there are free cells in the default colormap, the client creates a colormap for private use (Col. 1 lines 53-55)
transparently simulating the allocation of the private colormap using a default colormap, wherein the default colormap is retained in the frame buffer during the simulating and the simulating **includes allocating a secondary lookup table for storing information received from the application program relating to the intercepted request**; and	The first part means the default colormap is used to satisfy private colormap request, by allocating a secondary lookup table. Young teaches that the client creates a colormap for private use. (Col. 1 lines 53-55) (the same as allocating a secondary lookup table).
wherein said step of transparently simulating the allocation of a private colormap further comprises: storing in the secondary lookup table information received from said application program relating to one or more requested colors privately allocated by said application program;	The client then stores **colors it needs** (received information relating to the request) into any cell of the private colormap (secondary colormap) col. 4 line 31-43). Young does not teach that default colormap is swapped by the above action. Therefore the default colormap is retained in the frame buffer during the process.
performing a closest match of said requested color to a color stored in said default colormap; and returning said closest match to said application program.	Aschenbrenner et al. disclose in col. 6 lines 22-31 and col. 6 lines 48-51 the process of finding the closest color match of requested color to a color stored in default colormap and returning said closest match to said application. It would have been obvious to an ordinary person skilled in the art at the time of invention to combine the method for reducing color flashing of Young with the closest color matching of Aschenbrenner et al. to be able to always find a color for the image colors even if the colormap is full (always satisfying the request for a private colormap).

Appellant's argument in lines 1-3 of fist paragraph, page 11 state "in the closest color set process described in Aschenbrenner at col. 6, lines 22-31, the user must select or choose the closest color routine which causes the process to be visible or not transparent" and in lines 7-8 "there is no teaching of returning the closest match results to the requesting application as required in claim 1."

Examiner disagrees with appellant's argument. Although independent claim 1 does not disclose nor prohibit the ability of the user to make selection between the closest color routine and transparently simulating private colormap, decision operation 410 in Fig 4B and particularly specification page 11 lines 4-8 describe user's ability to select the closest color routine. "returning the closest match results to the requesting application" is the objective of Aschenbrenner's closest color routine step.

As discussed with reference to claims 6, 8 and 3, Young disclose "transparently simulating the allocation of the private colormap using a default colormap, wherein the simulating includes allocating a secondary lookup table" by "creating an indexed private colormap (secondary lookup table) and copying the private color cell to default colormap and then employing default colormap to satisfy the request for private colormap". Young fails to disclose or teach finding of a closest match of a requested color in a default colormap but Aschenbrenner teaches this feature or element.

It would be obvious to a person skilled in the art to add Aschenbrenner's element (finding the closest match) to Young's invention to satisfy the request for the private colormap using the default colormap at all the time.

Accordingly, Claim 1 is still rejected under 35 U.S.C. 103(a) as being unpatentable over Young and further in view of Aschenbrenner. Dependent claim 5 depends from claim 1 and claim 4 depends from claim 3 but they have limitations similar to claim 1 and therefore both claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young and further in view of Aschenbrenner.

Regarding claim 7 (group V), appellant argues in lines 3-4 of third paragraph on page 11 of appeal brief that read-only color cell requests are treated differently than other requests. Appellant's argument in lines 4-6 of third paragraph on page 11 state "Young and Aschenbrenner do not show this feature nor would it be obvious to one skilled in the art how to modify their teachings to obtain the claimed invention" and in lines 7-9 of third paragraph on page 11 "if a client requests a read-only color then a closest match is performed rather than allocating the requested color (by taking up unallocated cell in the default map)".

Appellant additionally argues in last paragraph on page 11 – second line on page 12 of appeal brief that "for a read-only request, skipping the storing step and performing the closest match and returning the results. If not for a read-only request, performing the storing if space is available otherwise performing the closest match and returning the results."

Young in view of Aschenbrenner anticipate this feature. Young disclose storing a not read-only color (read-write color) in col. 1 lines 49-56 and in col. 2 lines 42-47, but

Young fails to disclose performing the closest match when space is not available in the default colormap. As discussed with reference to claim 1 Aschenbrenner disclose that. It should be noted that a read-only cell may be shared amongst all of the clients, therefore referring to operation 410 in Fig 4B and specification page 11 lines 4-8 user force the application to use the closest matching color and Aschenbrenner teach this as well in col. 6 lines 22-31.

Accordingly claim 7 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Young and further in view of Aschenbrenner.

Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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